

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF MASSACHUSETTS**

MASSACHUSETTS INSTITUTE OF
TECHNOLOGY,

Plaintiff,

v.

HARMAN INTERNATIONAL
INDUSTRIES, INCORPORATED,

Defendant.

Civil Action No.: 05-10990 DPW

Magistrate Judge Judith G. Dein

ORAL ARGUMENT REQUESTED

**MIT'S MEMORANDUM IN OPPOSITION TO HARMAN'S MOTION FOR
SUMMARY JUDGMENT THAT CLAIMS 1, 42, AND 45 OF THE '685
PATENT ARE INVALID UNDER 35 U.S.C. § 102(b) DUE TO PUBLIC USE
AND
IN SUPPORT OF MIT'S CROSS-MOTION FOR PARTIAL SUMMARY
JUDGMENT THAT CLAIMS 1, 42, AND 45 OF THE '685 PATENT ARE NOT
INVALID UNDER 35 U.S.C. § 102(b)**

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I. INTRODUCTION

In its latest in a series of summary judgment motions, Harman asks this Court to find, as a matter of law, that there is clear and convincing evidence not subject to factual dispute that the inventors' testing of a Back Seat Driver research prototype on a public road was an invalidating "public use" of the invention under 35 U.S.C. § 102(b). Harman's Invalidity Motion fails because 1) the inventors retained complete control over the invention during testing; 2) the invention was not accessible to the research subjects or public during the testing; and 3) MIT in no way can be said to have extended its patent monopoly through such testing.

Indeed, the facts on their face require the *opposite* conclusion -- that there was no public use or public disclosure. MIT therefore hereby cross-moves for partial summary judgment that claims 1, 42, and 45 of the '685 patent are *not* invalid under 35 U.S.C. § 102(b).

II. STATEMENT OF LAW

A. The Law Of "Public Use"

"A patent shall be presumed valid...The burden of establishing invalidity of a patent or any claim thereof shall rest on the party asserting such invalidity." 35 U.S.C. § 282. Harman thus bears the burden of proving the '685 patent is invalid and can only overcome the presumption of validity with clear and convincing evidence. *See EZ Dock v. Schafer Sys., Inc.*, 276 F.3d 1347, 1351 (Fed. Cir. 2002).

35 U.S.C. § 102(b) provides that "[a] person shall be entitled to a patent unless the invention was ... in public use or on sale in this country, more than one year prior to the date of the application for patent." Section 102(b) erects two types of "statutory bars" for activities that occur more than one year before the filing date of a U.S. patent -- a "public use" bar and an "on sale" bar. The hallmarks of permissible inventive activities are (1) control over the invention and

third party use thereof or experimental activities, and (2) lack of commercial exploitation. *Moleculon Research Corp. v. CBS, Inc.*, 793 F.2d 1261, 1266 (Fed. Cir. 1986); *see Invitrogen Corp. v. Biocrest Mfg., Inc.*, 424 F.3d, 1374, 1382 (Fed. Cir. 2004). These hallmarks underscore the policies underlying the public use bar, namely, “discouraging removal of inventions from the public domain which the public justifiably comes to believe are freely available, prohibiting an extension of the period for exploiting the invention, and favoring prompt and widespread disclosure of inventions.” *Bernhardt, L.L.C. v. Collezione Europa USA, Inc.*, 386 F.3d 1371, 1379 (Fed. Cir. 2004) (quoting *Mannville Sales Corp. v. Paramount Sys., Inc.*, 917 F.2d 544, 550 (Fed. Cir. 1990)).

Specifically addressing the difference between the “public use” and “on sale” bars of § 102(b) in *Invitrogen*, the Federal Circuit established a two-prong inquiry for deciding cases in which the “public use” aspect of § 102(b) is implicated, holding that “[a] bar under § 102(b) arises where, before the critical date, the invention is [1] in public use and [2] ready for patenting.” 424 F.3d at 1379. The *Invitrogen* case confirms that the analysis for whether activities constitute “public use” is consistent with the inquiry regarding whether activities put an invention “on sale” within the meaning of § 102(b) under the standard set forth by the Supreme Court in *Pfaff v. Wells Electronics, Inc.*, 525 U.S. 55, 66-67 (1998).¹

¹ *Pfaff* requires that before the “on sale” bar of § 102(b) can be invoked, the invention must be (1) ready for patenting and (2) the subject to a commercial offer for sale. 525 U.S. at 66-67. Commentators have noted that “[m]any decisions consider Section 102(b) without carefully differentiating public use and on sale [bars].” Donald S. Chisum, 2 CHISUM ON PATENTS § 6.02[6] (release Dec. 2005) (pages 6-76 through 6-78); *see, e.g., Hall v. Macneale*, 107 U.S. 90, 96 (1883). As a result, the cases in which patents were found invalid based on § 102(b), indeed all of the cases Harman relies on, tend to invalidate the claims either under either the “public use” or “on sale” bars without carefully distinguishing the two, and involve the inventor ceding control over the invention to a third party such that the inventor does not control further dissemination about the invention.

In *Invitrogen*, the Federal Circuit stated that “in the context of a public use bar, evidence of experimental use may negate either the ‘ready for patenting’ or ‘public use’ prong” *and therefore must be considered.* 424 F.3d at 1379-80. *Invitrogen* instructs that evidence of experimentation is relevant for whether an alleged “use” is “public.” The court clarified the test for finding “public use”:

The proper test for the public use prong of the § 102(b) statutory bar is whether the purported use: (1) was accessible to the public; or (2) was commercially exploited...Thus, the test for the public use prong includes the consideration of evidence relevant to experimentation, as well as, *inter alia*, the nature of the activity that occurred in public; public access to the use; confidentiality obligations imposed on members of the public who observed the use; and commercial exploitation.

Id. at 1380. Harman is not asking for summary judgment that MIT put the technology “on sale” before the critical date. Therefore, the only issue before the Court is whether the MIT inventors made their invention “accessible to the public” more than a year before their filing date.

Invitrogen affirms the long-standing principle that inventors are allowed to test the durability of an invention without losing their right to a patent under § 102(b), *even if* the tests occur in public and *even if* the inventor suspects the invention will work. *Mannville Sales*, 917 F.2d at 551.

Field trials of the invention on public streets do not -- as Harman argues -- *ipso facto* convert a non-public field trial into a public use:

The use of an invention by the inventor himself, *or of any other person under his direction, by way of experiment, and in order to bring the invention to perfection*, has never been regarded as such a [public] use...the nature of [the invention] is such that it cannot be experimented upon satisfactorily except on a highway, which is always public...If durability is one of the qualities to be attained, a long period, perhaps years, may be necessary to enable the inventor to discover whether his purpose is accomplished...So long as he does not *voluntarily allow others to make it and use it, and so long as it is not on sale for general use*, he keeps the invention under his own control, and does not lose his title to a patent...[the inventor] believed [his invention] to be a good thing, but he was not

sure; and the only mode in which he could test it was to place a specimen of it in a public roadway...[the invention's] character for durability could not be ascertained without its being subjected to use for a considerable time.

City of Elizabeth v. Am. Nicholson Paving Co., 97 U.S. 126, 134-35 (1877) (emphasis added).

When an inventor does not cede control over the patented device to another or does so only with some restriction on subsequent dissemination, no “public use” has occurred. *Moleculon*, 793 F.3d at 1266.

Nor, as Harman suggests, is the presence or absence of a confidentiality agreement *determinative* of the public use issue. *Id.* (holding no “public use” where the inventor “had not given over the invention for free and unrestricted use by another person” despite absence of confidentiality obligations) (citing *TP Labs., Inc. v. Prof'l Positioners, Inc.*, F.2d 965, 972 (Fed. Cir. 1984)). Indeed, even the “corset spring” case characterized by Harman as the “leading” public use case teaches that a public use issue arises only when “an inventor, having made his device, *gives or sells it to another, to be used by the donee or vendee, without limitation or restriction...and it is so used.*” *Egbert v. Lippmann*, 104 U.S. 333, 336 (1881) (emphasis added).

B. The Law Of “Printed Publication”

The Patent Statute also provides that “[a] person shall be entitled to a patent unless the invention was ...described in a printed publication in this or a foreign country... more than one year prior to the date of the application for patent.” 35 U.S.C. § 102(b). The words “printed publication” require “dissemination and public accessibility” *before the critical date*. *In re Klopfenstein*, 380 F.3d 1345, 1348 (Fed. Cir. 2004).

A limited dissemination to professional colleagues does not make a thesis draft a “printed publication” where “professional and behavioral norms entitle a party to a reasonable expectation that the information...will not be copied.” *Id.* at 1351. Indeed, in a case raising similar issues to

those raised by Harman, the Federal Circuit held that a graduate thesis defense was not a “printed publication” under 35 U.S.C. § 102(b):

[W]e are unconvinced that appellant’s thesis defense before the graduate committee in its official capacity as arbiter of appellant’s entitlement to a master’s degree was somehow transmuted into a patent-defeating publication merely by depositing the thesis in the university library where it remained uncatalogued and unshelved as of the critical date in question.

In re Cronyn, 890 F.2d 1158, 1160 (Fed. Cir. 1989) (quoting *In re Bayer*, 568 F.2d 1357, 1362 (C.C.P.A. 1978)).

III. ARGUMENT

A. As A Matter Of Law, Field Trials Of Research Prototypes Are Not Invalidating Because The Invention Was Not “Accessible To The Public” Or “Commercially Exploited”.

In this case, the evidence shows that the circumstances surrounding the field trials of Back Seat Driver prototypes do not amount to “public use,” and MIT did not commercially exploit the inventions of the ’685 patent before the critical date.

1. The Inventors Retained Complete Control Over The Invention, The Experimental Environment, And The Extent Of Any Possible Dissemination During The Field Trials.

To prevail here, Harman must show that the MIT inventors engaged in an impermissible “public use” by ceding control over the invention to a third party or attempting to commercially exploit the invention. *Moleculon*, 793 F.2d at 1266.

Harman’s allegation of “public use” is premised on the undisputed fact that some of the field trials the inventors conducted during the summer of 1989 occurred on public streets in Boston and Cambridge. Harman’s motion leaps from that simple fact, to a proposed legal conclusion that *because* the automobile was driven on a public street, the invention was

disclosed to the public. No case law supports such an incredible leap, and the evidence in fact leads to the contrary conclusion.

First, in the most obvious sense, the inventions of the '685 patent were not "accessible to the public." Stephen G. Kunin, a career U.S. Patent and Trademark Office professional whose thirty-four-year-service included twelve years as a patent examiner and ten years as Deputy Commissioner for Patent Examination Policy in the Office of the Commissioner for Patents, discusses this in his expert report rendered on MIT's behalf in this case, where he notes that patent examiners and inventors are taught by the Manual of Patent Examining Procedure ("MPEP") that "[t]he 'public' aspect of 'public use' would seem to connote some impartation of knowledge to the public regarding the workings of an invention. . . . Mere knowledge of the invention by the public does not warrant rejection under 35 U.S.C. 102(b)." Exh. A at ¶ 3-5, 19 (discussing MPEP § 2125.02 (5th ed.)).

Nothing about the field trials can reasonably be argued to suggest that the inventors disclosed the workings of the Back Seat Driver prototype to either a driver or anyone who happened to see the prototype driving down the road. It is undisputed that the '685 patent inventors retained control over all prototypes of the Back Seat Driver during their field trials. During the field trials, Dr. Davis or Mr. Schmandt would *privately* enter a destination for the driver on a cellular telephone keypad.² MIT's SOF 27-28. The destination would *privately* be communicated over a cellular telephone link ("the data link") to a computer at the MIT Media Lab, which would *privately* calculate the driver's route and determine appropriate instructions that would be communicated *privately* to the vehicle by a speech synthesizer to a second cellular

² By "privately," MIT means to connote not that the driver or others working with Dr. Davis or Mr. Schmandt might not have known what was going on, but that the *public* at large -- those who might have seen the car driving down the street -- would have absolutely no knowledge as to what was happening.

phone in the car (“the voice link”). MIT’s SOF 27-28, 30. The driver would hear driving instructions from the second cellular phone and follow the instructions along the route. MIT’s SOF 27, 30. During all of this, Davis or Schmandt would be in the vehicle observing the driver’s reaction to the instructions and communicating position data to the computer at the Media Lab via the data link, and would note the amount of time before the voice link or the data link would fail, which it frequently did. MIT’s SOF 11-18, 22-24, 30-31, 36-38.

In other words, the *public* on the street was not aware of *any* element of the claimed invention, and the only elements of the claimed invention to which the *driver* was exposed during the field trial was the cellular phone for entering data (“driver input means”) and the cellular phone that provided the instructions (“voice apparatus”). MIT’s SOF 27. Importantly, at least *six* elements of claim 1 were not in the car or exposed to the driver, but were all running at the Media Lab, including the “computing apparatus,” “map database,” “location system,” “route-finder,” “discourse generator,” and “speech generator.” MIT’s SOF 28. At best, after a field trial, the driver could only tell others that she drove in a car that told her where to go.³ The driver could not, however, disclose how the car did so because the heart and guts of the invention were not in the car.

Harman makes much of the fact that MIT’s field trial drivers did not execute written confidentiality agreements, even though the Federal Circuit has ruled that the “presence or absence of [a confidentiality] agreement is not determinative of the public use issue.” *Moleculon*, 793 F.2d at 1266. Whether or not confidentiality agreements were signed, Harman has not shown that *anyone* who had access to the technology thought they had free rights to the

³ The driver’s experience during the field trials was probably similar to David Hasselhoff’s on the once-popular television show “Knight Rider,” in which a fictional car (named “KITT”) equipped with artificial intelligence spoke to Hasselhoff. *See* http://en.wikipedia.org/wiki/Knight_Rider (last visited August 22, 2007).

technology or to disclose it -- and the burden *is* Harman's. Indeed, the evidence shows that formal confidentiality agreements covering the field trials were unnecessary here -- Davis and Schmandt controlled any possible dissemination of information about the system by limiting the driver's experience to reacting to spoken driving instructions. MIT's SOF 30-32, 40-42. Furthermore, the inventors had an expectation that those who test drove the car had an obligation to not publish the limited information they had because the project was the subject of Davis' doctoral research. Exh. A at ¶¶ 77-78 (quoting Schmandt Dep. at p. 91:1-92:8, discussing Schmandt Dep. at p. 92:9-95:9, quoting Davis Dep. at p. 105:2-9, discussing Davis Dep. at p. 103:14-104:12). Harman has not shown that anyone thought they were under anything other than an implied confidentiality obligation not to disclose research on the Back Seat Driver.

Further, Harman does not challenge the fact that Davis or Schmandt were always in the car during field trials, thus never "giv[ing] or sell[ing] it to another, to be used...without limitation or restriction." *Moleculon*, 793 F.2d at 1266 (quoting *Egbert*, 104 U.S. at 336). Harman does not question that when not in use, the car was parked in a private MIT garage with card access or that the only people with keys or access to the car were Davis and Schmandt, and thus the car could not be used without the permission and approval of Davis or Schmandt. MIT SOF 28-29, 31-32. There is really no question that the inventors controlled the "use" of the car equipped with the Back Seat Driver and all field trials -- no unsupervised or uncontrolled experimental activity occurred at any time.

Finally, there is no question that MIT did not sell the invention before the critical date. Harman makes a weak argument that "[a]t least some of the pre-critical date uses of MIT's Back Seat Driver were for commercial purposes," but Harman points to nothing other than an internal MIT letter that refers to NEC as a "customer" and to field trials involving "GM [General Motors]

personnel.” Harman doesn’t mention, however, that the Federal Circuit has held that seeking potential licensees or investors for an invention does not invoke the on-sale bar as long as the product itself is not subject to a commercial offer for sale. *Elan Corp., PLC v. Andrx Pharm., Inc.*, 366 F.3d 1336, 1341 (Fed. Cir. 2004) (“[a]n offer to enter into a license under a patent for future sale of the invention covered by the patent when and if it has been developed...is not an offer to sell the patented invention”).⁴

The limited nature of the activity that occurred in public, the limited exposure to elements of the invention, the controlled nature of possible further dissemination, and the narrowly-tailored duration of experimentation all weigh in favor of summary judgment *for MIT* that these were not invalidating public uses. Certainly, at a minimum, Harman has not proven the “accessible to the public” prong of *Invitrogen* by clear and convincing evidence.

2. The Field Trials Were For Research Purposes To Test The Durability Of The Invention.

Even if the *invention* had been seen by someone in public -- *and there is no evidence here that it ever was* -- Harman needs to prove that that disclosure was not incidental during testing of the device. Harman spends a lot of time in its brief arguing that because the invention was “reduced to practice” *during* the field trials, the Court should find it was publicly disclosed during those trials. Harman argues as though “reduction to practice in public” equates with

⁴ Commentators also recognize that demonstrating features of the invention to potential investors is permissible and necessary. See 2 Donald S. Chisum, CHISUM ON PATENTS § 6.02[6] (release Dec. 2005) (pages 6-84 through 6-86):

An offer to sell or license the patent rights to an invention should not be viewed as an offer of the invention for sale, at least if the offer and nature of the circumstances make clear that the offeree or licensee could not sell or use such embodiments without further development work. A contrary result would make it difficult for inventors with limited resources to raise capital to perfect the invention or prepare a patent application.

“public use.” In fact, reduction to practice and public disclosure are two entirely separate things -- reduction to practice is merely one *factor* to consider. *Baker Oil Tools, Inc. v. Tex. Iron Works, Inc.*, 828 F.2d 1558, 1562 (Fed. Cir. 1987) (“the district court erred in law in its interpretation...[the plaintiff’s] assertion before the PTO that the early device was reduced to practice should not have been given preclusive or estoppel effect”) (emphasis added).

The proper inquiry is not whether the invention used in public was operable, but whether the invention was *disclosed* to the public when known to work in its intended environment *durably*.

[M]erely because [the inventor] tested the invention briefly in Ohio does not mean [the inventor] had ascertained whether the invention was operable for its intended purpose in its intended environment. When durability in an outdoor environment is inherent to the purpose of an invention, then further testing to determine the invention’s ability to serve that purpose will not subject the invention to a section 102(b) bar.

Mannville Sales, 917 F.2d at 551 (emphasis added) (citing *City of Elizabeth*, 97 U.S. at 133-34).

Patent Office expert Mr. Kunin noted that patent examiners and inventors are taught:

[e]ven if an invention has been reduced ‘to a reality,’ the invention is not necessarily ‘complete’ unless one would know how an invention would work upon installation . . . Such knowledge is not synonymous with the lack of any expectation of ‘problems’ upon installation, as long as the ‘problems’ are not due to ‘fundamental defects’ in the invention.

Exh. A at ¶ 18 (citing MPEP § 2125.01 (5th ed.)). Mr. Kunin explained that evidence of experimentation must be considered, not to determine whether an “experimental use” exception exists, but as part of a single inquiry:

Under this analysis, it is incorrect to impose on the patent owner, as the trial court in this case did, the burden of proving that a ‘public use’ was ‘experimental’. These are not two separable issues. It is incorrect to ask: ‘Was it public use?’ and then, ‘Was it experimental?’ Rather, the court is faced with a single issue: Was it public use under § 102(b)? *TP Laboratories v. Professional Positioners, Inc.*, 724 F.2d 965, 971 (Fed. Cir. 1984).

Id. at ¶ 21 (quoting MPEP § 2128.01 (5th ed.)).

Testing to ensure the durability of an invention in its intended environment is permissible under § 102(b), even when durability is not claimed in the patent. *EZ Dock*, 276 F.3d at 1353 (“When an inventor can show changes during experimentation that result in features later claimed in the patent application, this evidence is a strong indication that the activities of the inventor negated any evidence of commercial exploitation of an invention ready for patenting”); *see also Mannville Sales*, 917 F.2d at 550 (permitting an inventor to test his invention’s durability during winter based on the nature of the invention even though durability was not claimed).

There is no dispute that the invention changed as a result of the durability testing to improve the quality of spoken instructions and to improve the durability of the invention. MIT’s SOF 11-18, 22-24, 36-38, 43-44, 47. There is no dispute that the internal operation of the system changed as a result of the field trials. MIT’s SOF 31, 37-38, 47. It was not until after the critical date, when the inventors moved the computer on-board the car, that the inventors solved the durability problem associated with the communications link. MIT’s SOF 24, 43.

Harman cannot show *any* evidence, let alone clear and convincing evidence, that the field trials were intended to commercially exploit the invention, that they publicly disclosed the invention, or that they were conducted for any reason other than research into the durability of the Back Seat Driver system.

3. The Field Trials Do Not Violate The Public Policy Underlying The “Public Use” Bar.

Finally, Harman can point to nothing to suggest that the inventors’ research activities and subsequent patent application run afoul of the policies underlying the “public use” bar of § 102(b).

The inventors did nothing to lead the public to believe the invention was “in the public domain.” *Mannville Sales*, 917 F.2d at 550. Harman has no evidence -- none -- that the drivers performing the field trials with Davis or Schmandt in the back seat believed that the invention was available to the public or could even ascertain what the invention was. The nature of the activity that occurred in public was narrowly tailored to exactly what the inventors were trying to discover -- whether discourse worked for generating instructions and whether the communications links would survive lengthy trips.

Harman makes much of the inventors’ activities during the summer of 1989 to publish *preliminary* findings about Back Seat Driver research prototypes, and their attendance at conferences where the Back Seat Driver was discussed among other developments in the linguistics and automobile navigation fields. *See* Harman’s SOF 42-47. However, none of the conferences attended by the inventors in 1989 or the papers submitted put “the invention” in the public domain. It is undisputed that the inventors did not demonstrate the Back Seat Driver prototypes at these conferences. MIT’s SOF 35. The papers were disclosed to the Patent Office, which found them immaterial to patentability. Davis’ thesis, the June 1989 IEEE Abstract, the August 1989 IEEE paper, and the VNIS 1989 paper all refer to the system as a “working prototype,” “prototype form,” or “research prototype.” *See* Docket No. 144 at 11-12. The evidence of experimentation in this case is overwhelming. MIT’s SOF 11-18, 22, 24-25, 36-38, 40-42, 47. The very nature of the field trials, as discussed above, demonstrates indisputably, that the invention was not “in public use” under the first prong of *Invitrogen*.⁵

⁵ Harman’s Statement of Facts irrelevantly states that, “[m]uch of the technology used in the Back Seat Driver was already in the public domain in 1987-88,” as if this somehow defeats MIT’s patent. Docket No. 155. The fact is, no one had ever built an automobile navigation system that generated instructions according to a discourse model in real time before Davis and Schmandt. That some *elements* of the invention may have existed when Davis and Schmandt

Harman similarly points to a general policy at MIT and the Media Lab to share information. Harman's SOF 40-41. Harman fails to cite any case, however, that a general university policy trumps the facts -- Harman would have the Court rule that because MIT's and the Media Lab's policies, all testing of any MIT inventions prior to the corresponding patents' critical dates are invalidating public uses.

In fact, the inventors' actions here are entirely consistent with MIT's policy that favors "prompt and widespread disclosure of inventions." *Mannville Sales*, 917 F.2d at 550. The Back Seat Driver research continued from 1988 through 1991 or 1992. MIT's SOF 2, 24-25, 33-34. Dr. Davis signed his thesis on August 4, 1989. MIT's SOF 53. During the summer and fall of 1989, the inventors published several papers discussing the problem solved by the Back Seat Driver research. Harman's SOF 42-44. At the time, the inventors realized that a practical application of the Back Seat Driver would require the computer to be on-board the vehicle to avoid loss of signal transmission. MIT's SOF 14-16. Thus, although the Back Seat Driver system worked well enough for Dr. Davis to earn his thesis, the crux of which was automated generation of driving instructions according to a discourse model in an automobile navigation system, the invention still needed to be perfected for use on public roads in real-world situations. MIT's SOF 24-25, 38, 43. Sometime after August 4, 1989 and before August 9, 1990, the inventors successfully installed an in-vehicle computer, after which, MIT decided to file a patent application. MIT's SOF 24-25. MIT disclosed to the Patent Office all of the authors' Back Seat Driver publications, including Davis' thesis, even though it was not even prior art. MIT's SOF

built the Back Seat Driver is immaterial for purposes of judging patentability of the invention as a whole, especially where key elements, such as the "discourse generator" of claim 1, were developed entirely by the inventors.

2. Tellingly, Harman did not introduce its first discourse-generating navigation system, the TrafficStar, until 1997.

4. Harman's Motion Ignores All Of The Contrary, Yet Dispositive, Facts And Cites Factually Irrelevant Cases To Make Its Case.

Harman seems to believe that if it summarily calls the field trials “public uses” often enough, perhaps the Court will avoid reading any further. However, even a cursory inspection of the cases Harman relies upon reveals the nature of this ruse.

All of the cases Harman relies upon have the inventor ceding control over the invention (*i.e.*, by selling or giving away the invention to third parties) and/or efforts to commercialize the invention, in some cases many years before patent protection was sought. Unlike this case, none of Harman’s cases involve graduate-level researchers conducting field trials and durability testing of an invention with no attempts to commercially exploit the invention. *See Hall v. Macneale*, 107 U.S. 90, 96 (1883) (inventor sold at least three safes containing invention before the critical date; “the invention covered by claim 3 of the patent in suit was in use and on sale more than two years before the appellant applied for that patent.”); *Egbert v. Lippmann*, 104 U.S. at 335 (inventor gave invention to a female friend to own and wear without restriction); *Cargill, Inc. v. Canbra Foods, Ltd.*, 476 F.3d 1359, 1370, 1372 (Fed. Cir. 2007) (letter from patentee setting forth contract terms before the critical date erects on sale bar under § 102(b); public use not an issue); *Allen Eng’g. Corp. v. Bartell Indus., Inc.*, 299 F.3d 1336, 1352 (Fed. Cir. 2002) (invention was sold to a third party before the critical date, and public use bar of § 102(b) was not an issue); *New Railhead Mfg., L.L.C. v. Vermeer Mfg., Co.*, 298 F.3d 1290, 1294, 1298 (Fed. Cir. 2002) (parties did not dispute that patented device, a drill bit, used in patented method was offered for sale before the critical date; inventor retained control over drill bit itself but not over the method of its use); *Netscape Commc’ns Corp. v. Konrad* 295 F.3d 1315, 1321-24 (Fed. Cir.

2002) (demonstration was to “computer personnel who could easily demonstrate the invention to others”; “demonstration was geared more toward making the [invention] more commercially attractive, with endorsements from outside technical people, than for experimental use purposes”; [inventor] “did not monitor tests of the [invention], but...would simply turn on the system and let people try it out”; “[inventor] was aware that a workstation was made available to use [his invention], but [the inventor] was unaware of where [the workstation] was located”; inventor offered invention for sale before the critical date); *Baxter Intern., Inc. v. COBE Labs., Inc.*, 88 F.3d 1054, 1058 (Fed. Cir. 1996) (inventor seeking to declare third party researcher’s activities “not public use” applicable to inventor’s patent); *Lough v. Brunswick Corp.*, 86 F.3d 1113, 1116, 1120 (Fed. Cir. 1996) (parties did not dispute that use was public, and inventor gave copies of the invention to six people); *Harrington Mfg. Co. v. Powell Mfg. Co.*, 815 F.2d 1478, 1481 (Fed. Cir. 1986) (industry journalist “not only reported that the [invention] worked flawlessly...but even published an approximate cost [which was] a clear indication of [an inventor’s] commercial motive”) (emphasis added); *Barmag Barmeer Maschinenfabrik AG v. Murata Mach., Ltd.*, 731 F.2d 831, 834-35 (Fed. Cir. 1984) (negotiations over sales contract terms, construction of invention, and purchase order from buyer all before the critical date erected an on-sale bar under § 102(b); public use not an issue); *Minn. Mining & Mfg. Co. v. Appleton Papers, Inc.*, 35 F. Supp. 2d 1138, 1147-48 (D. Minn. 1999) (inventors printed 10,000 sheets of forms with the invention and distributed them within the company and “exercised no control over where the forms were sent, who received them, or how they were used”); *Sys. Mgmt. Arts, Inc. v. Avesta Techs., Inc.*, 87 F. Supp. 2d 258, 270 (S.D.N.Y. 2000) (addressing whether third party activities could constitute “public use” for purposes of § 102(b)); *Buehler AG v. Ocrim, S.P.A.*, 836 F. Supp. 1291, 1300-1302 (N.D. Tex. 1992) (written offer for sale of

invention and acceptance thereof before the critical date erected § 102(b) bar; public use not an issue).

Harman also misstates the law of “ready for patenting” by arguing, “MIT cannot overcome the § 102(b) statutory bar by arguing that the invalidating use was merely permissible ‘experimentation.’” Docket No. 154 at 17. In making this argument, Harman cites only pre-*Invitrogen* public use cases for misleading sound bites. As the *Federal Circuit* clearly set forth in *Invitrogen*, however, “in applying the *Pfaff* two-part test in the context of a public use bar, evidence of experimental use may negate either the ‘ready for patenting’ or ‘public use’ prong.” *Invitrogen*, 424 F.3d at 1379-80 (emphasis added). Thus, in suggesting that the Court is precluded from *even considering* the experimental nature of the field trials, Harman is dead wrong.

5. MIT Is Entitled To Summary Judgment On This Issue In Its Favor.

In fact, in cases *similar* to the instant case, courts regularly find *no* invalidating public use, and that is why MIT cross-moves for summary judgment on the field trials. *See Invitrogen*, 424 F.3d at 1383 (no public use where researchers did not commercially exploit the invention); *EZ Dock*, 276 F.3d at 1353 (no on-sale bar because inventors engaged in permissible experimental activity in multiple different water conditions in multiple seasons; inventors maintained control over the experimentation, including formal requests for feedback); *Moleculon*, 793 F.2d at 1266-67 (finding no public use bar when an inventor showed prototypes of Rubik’s cubes to office mates and fellow graduate student; lack of confidentiality obligations was not dispositive and inventor’s control of third party access to the invention held to be important); *TP Labs.*, 724 F.2d at 972-73 (permissible experimental use occurred when dentist installed prototypes of the invention on three patients, which required lengthy testing due to

tooth alignment; doctor-patient relationship suggests confidentiality based on the privileged nature of communications therebetween).

As a matter of law, summary judgment may be granted in favor of MIT that the patent is not invalid under § 102(b) due to field trials.

B. MIT Is Also Entitled To Summary Judgment That Davis' Thesis Was Not A "Printed Publication" Before The Critical Date.

In Harman's earlier motion for summary judgment of inequitable conduct, it alleged that MIT improperly failed to disclose information about the public availability of Davis' thesis to the Patent Office. MIT now cross-moves for summary judgment that claims 1, 42, and 45 of the '685 patent are not invalidated by Davis' thesis or his thesis defense.

For Harman to prevail at trial showing the '685 patent is invalid based on a "printed publication," it must show that "the invention was ...described in a printed publication in this or a foreign country" before the critical date. 35 U.S.C. § 102(b). The requirements of a "printed publication" are "dissemination and public accessibility" before the critical date. *In re Klopfenstein*, 380 F.3d at 1348.

The *Cronyn* case is on all fours with the facts at issue here:

[W]e are unconvinced that appellant's thesis defense before the graduate committee in its official capacity as arbiter of appellant's entitlement to a master's degree was somehow transmuted into a patent-defeating publication merely by depositing the thesis in the university library where it remained uncatalogued and unshelved as of the critical date in question.

890 F.2d at 1160 (Fed. Cir. 1989).

There is no question that Davis' thesis was not received by the MIT library until after the critical date -- February 27, 1990, at the earliest. MIT's SOF 53-54. Under the clear teaching of *Cronyn*, Davis' thesis did not become a printed publication until it was catalogued and shelved in

the MIT library, sometime in 1990 and after the critical date. Therefore, the thesis could not qualify as a “printed publication” until that date.

As discussed in MIT’s opposition to Harman’s unenforceability summary judgment motion, even *drafts* of Davis’ thesis were not publicly available or disseminated until after the critical date, and then, only to trusted colleagues and academic advisors. MIT’s SOF 53-57, 62, 64.

Harman points to six “facts” it says *suggests* that the thesis was “publicly available” and therefore a “printed publication,” even though there is no evidence that the thesis was ever distributed before the critical date. Assuming these facts were true (as the Court needs to do on summary judgment), *none* of these facts prevents grant of MIT’s cross-motion:

(1) Harman argues that because Dr. Davis “could” print out a copy of his thesis whenever he wanted to and give it to whomever he wanted to, the thesis *was* a printed publication. Harman has not shown *any* evidence, however, that Davis did print out drafts of his thesis to distribute before the critical date. Dr. Davis signed a declaration noting that printing and distributing his thesis would not have been his normal practice. MIT’s SOF 61-62. Moreover, drafts of the thesis were kept on a password-protected computer in a locked MIT Media Lab room, and only Davis and Schmandt had access to the computer. MIT’s SOF 51-52.

(2) Harman argues that because a University of Minnesota student *asked* for a copy of Davis’ thesis in May 1989, the Court could *assume* Davis sent the student a copy of the thesis. Harman has no evidence that Dr. Davis in fact sent a copy. Davis testified that he did not recall sending a copy of his thesis to this student and doing so would not have been his normal practice; and even if he did, one draft does not make it a printed publication. MIT’s SOF 55.

(3) Harman argues that because it has a *draft* of his thesis defense poster, Davis must have been ready to defend his thesis in May of 1989, and the Court should assume his thesis was available to the public then. Again, Harman has not a shred of evidence to suggest that the defense took place on that date, or that any thesis was handed out. In fact, Davis was not ready to defend his thesis in May 1989, and did so later in the Fall of 1989 when his research was completed. MIT's SOF 63, 65-68.

Indeed, one can be quite confident that the thesis defense never occurred in May 1989 -- the "witness" who provided Harman with the draft thesis defense poster is a Kirkland & Ellis partner, and one can assume that if *he* knew the thesis defense occurred in May 1989, he would be testifying to that fact. Harman's counsel has represented, however, that the Kirkland partner will *not* testify in this action.

(4) Harman argues that NEC, the research sponsor of the Back Seat Driver received a copy of Davis' thesis before the critical date, referring to a "Final Report" dated July 31, 1989 and addressed to NEC. Harman cannot show, however, that the "Final Report" was *sent* on July 31, 1989, and indeed, the date represents the closing date of a reporting period and Mr. Rittmueller did not receive the "Final Report" until sometime after July 31, 1989. Mr. Rittmueller testified he did not receive a copy of Davis' thesis until it was placed in the MIT library. MIT's SOF 69-71. Even if Mr. Rittmueller did receive it, however, as a research sponsor, NEC understood that communications with MIT were to be held "close to the vest," and not for public dissemination. MIT's SOF 72.

(5) Harman argues that Lynn Streeter, who sat next door to a member of Davis' thesis committee, Mike Lesk, at Bellcore, may have received a copy of Davis' thesis before the critical

date. However, Dr. Streeter says she did not receive a copy of the thesis until it was “published” or after the thesis defense, and Harman has no evidence to the contrary. MIT’s SOF 71-73.

6) Finally, Harman argues that because Davis at one point considered having his thesis defense before the critical date, the Court should assume that he handed out his thesis before the critical date, despite all evidence to the contrary.

It is well-settled that where a thesis document itself is not a “printed publication,” a thesis defense before a graduate committee does not convert the thesis or the defense into a patent-barring publication or act. *In re Cronyn*, 890 F.2d at 1160. As a matter of law, Davis’ thesis defense cannot invalidate the ’685 patent as a “printed publication,” especially where, as here, the thesis itself was not publicly available via the MIT library until sometime in 1990, after the critical date.

Harman has not a shred of evidence that Davis’ thesis was publicly available more than a year before the patent filing date. All it has is evidence that some people received it soon after it was finished -- after the critical date. As a matter of law, on this evidence, the Court can hold that Davis’ thesis was not a “printed publication” that could invalidate the ’685 patent.

IV. CONCLUSION

MIT has shown that under the applicable law and relevant facts MIT is entitled to summary judgment that claims 1, 42, and 45 are not invalid under § 102(b). At a minimum, Harman has failed in its burden to demonstrate by clear and convincing evidence that claims 1, 42, and 45 of the ’685 patent are invalid based on public use. Therefore, MIT respectfully requests that the Court deny Harman’s Invalidity Motion and grant MIT’s cross-motion addressed herein.

August 30, 2007

Respectfully Submitted,

Massachusetts Institute of Technology,
By its Attorneys,

/s/ Steven M. Bauer

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CERTIFICATE OF SERVICE

I certify that on August 30, 2007, I caused a copy of the forgoing document to be served upon counsel of record for Harman International Industries by the Court's ECF system.

/s/ Steven M. Bauer

Steven M. Bauer

EXHIBIT A

**UNITED STATES DISTRICT COURT
DISTRICT OF MASSACHUSETTS**

MASSACHUSETTS INSTITUTE OF
TECHNOLOGY,

Plaintiff,

v.

HARMAN INTERNATIONAL INDUSTRIES,
INCORPORATED,

Defendant.

) Civil Action No. 05-10990-DPW

I. QUALIFICATIONS

1. I am employed by the law firm of Oblon, Spivak, McClelland, Maier & Neustadt, P.C. ("Oblon"), 1940 Duke Street, Alexandria, VA 22314, and have been asked to testify as an expert witness on behalf of Massachusetts Institute of Technology ("MIT"). My *curriculum vitae*, including an identification of publications that I have authored, is attached hereto as Exhibit 1. I have testified once at trial as an expert witness. I have testified by deposition as an expert witness in the cases listed in Exhibit 2.

2. Since November 1, 2004, I have served in an "of counsel" capacity in the Oblon law firm, where I provide advice on the practice and procedures of the United States Patent and Trademark Office ("Patent Office" or "USPTO"), and advise and render opinions on the non-infringement and infringement of patents. Also, as indicated above, I serve as an expert witness on patent office policy, practice and procedure when called upon to do so.

3. From 1994 through October, 2004, I served as the Deputy Commissioner for Patent Examination Policy in the Office of the Commissioner for Patents in the United States Patent and Trademark Office. From 1994 to 2000, the position had the title of Deputy Assistant Commissioner for Patent Policy and Projects in the Office of the Assistant Commissioner for Patents. On March 29, 2000, the position was renamed the Deputy Commissioner for Patent Examination Policy. In my ten years as Deputy Commissioner for Patent Examination Policy, I participated in the establishment of patent policy for the various Patent Organizations under the Commissioner for Patents, including changes in patent practice, revision of rules of practice and procedures, establishment of examining priorities and classification of technological arts, and oversaw the operations of the Office of Patent Legal Administration, Patent Cooperation Treaty Legal Administration, and the Office of Petitions.

4. Prior to my appointment to the position of Deputy Commissioner for Patent Examination Policy, I served as the Deputy Assistant Commissioner for Patents from 1991 to 1994, prior to which I served in that position on an acting basis from 1989 to 1991. In that role, I had responsibility for supervision of the Patent Examining Group Directors and for managing the Patent Examining Corps.

5. From 1983 to 1989 I managed patent examining groups. First, on an acting basis in 1982 until being named Group Director in 1983, I directed the Manufacturing Technologies Examining Group 320. Then in 1984, I formed the Telecommunications, Measuring and Testing Examining Group 260 and became its first Group Director.

6. I also served for nine years as an Examiner in the Patent and Trademark Office (1970-1979) and for an additional three years as a Supervisory Primary Examiner (SPE) (1979-1982). In the latter capacity, I ran the Patent Academy and trained and instructed assistant examiners in the examination of patent applications and served as an Instructor at the Patent Academy of the Patent and Trademark Office. As both a patent examiner and SPE, I performed or supervised the work required to be performed by the examiner to (1) examine originally filed patent applications; and (2) examine continuing applications, including continuations and continuations-in-part.

7. I have considerable direct experience in reviewing the work of patent examiners to determine whether they followed existing patent policy, practice and procedures and performed examinations of the required quality. This experience came as a result of my serving as Deputy Commissioner for Patent Examination Policy, a Patent Examining Group Director and a Supervisory Primary Examiner. As a Group Director and a Supervisory Primary Examiner, I was often called upon to review the work of examiners to determine whether those examiners

were sufficiently competent to be granted signatory authority. Such reviews included a review of the entire prosecution history of an allowed or abandoned application to determine whether the invention was understood by the examiner, whether relevant references were properly applied, whether patent policy, practice and procedures were properly followed and whether the allowed claims were patentable over the art of record. Also, while serving as Deputy Commissioner for Patent Examination Policy, I decided appeals on quality reviewed applications where there was a disagreement between the Office of Patent Quality Review and a Patent Examining Group as to whether prosecution on the merits of a reviewed application should be reopened. I also reviewed and approved requests for reconsideration by a Patent Examining Group Director of an adverse panel decision from the Board of Patent Appeals and Interferences, and determined whether a Director Ordered Reexamination of an issued patent should be instituted.

8. I have significant knowledge of the duty of disclosure criteria concerning what patent practitioners must do to comply with the Patent Office requirements of candor, good-faith, and disclosure in dealing with examiners. This experience comes as a result of my having oversight responsibility of the Manual of Patent Examining Procedure (the "MPEP") that specifically includes Chapter 2000 directed to the Duty of Disclosure from 1994 – 2004 when I served as the Deputy Assistant Commissioner for Patent Policy and Projects and the Deputy Commissioner for Patent Examination Policy, and having participated in the establishment of the 1992 version of 37 C.F.R. § 1.56 when I was the Deputy Assistant Commissioner for Patents. Moreover, as a patent examiner, Supervisory Patent Examiner and Patent Examining Group Director, I made recommendations for rejection of claims in patent applications in which an issue of a violation of the duty of disclosure during the period when the 1977 version of 37 C.F.R.

section 1.56(d) was in effect. Such recommendations were then forwarded to the Office of the Assistant Commissioner for Patents where a Special Program Examiner would evaluate whether a rejection of claims under 37 C.F.R. section 1.56(d) was warranted.

9. I have considerable experience in reviewing patent prosecution histories, including specifications and interpreting claim language, as a result of the positions I held at the USPTO for more than 34 years and as an attorney in private practice.

10. Although I am not a technical expert in this case, I have examined and supervised the examination of numerous patent applications in the electrical arts. However, I do not profess to have special technical expertise concerning automobile navigation systems, and have not been asked to opine on matters beyond USPTO patent examination policy, patent practice and procedures and the patent law.

II. COMPENSATION

11. The Oblon law firm is being compensated at my usual billing rate of \$680 per hour for my time spent in independent review and study as an expert on patent office practice and procedures. It expects to be compensated at the same rate for my time spent testifying by deposition or at trial. My compensation is not dependent on the results of my testimony.

III. MATERIALS REVIEWED IN FORMULATING OPINIONS

12. The general materials that I have reviewed and which form the basis for my opinions include the materials set forth in Exhibit 3 attached to this report.

13. The various topics about which I may testify, my opinions and the reasons supporting those opinions are set forth below.

IV. PATENT-IN-SUIT

14. U.S. Patent No. 5,177,685 ("the '685 patent") entitled "Automobile Navigation System Using Real Time Spoken Driving Instructions" issued to MIT on January 5, 1993, from U.S. Patent Application No. 07/565,274, filed on August 9, 1990. The inventors of the '685 patent are James R. Davis and Christopher M. Schmandt.

V. BASES FOR TESTIMONY AND OPINIONS

15. The bases for my testimony and opinions include the materials identified above; my background, training, and over 36 years of working experience in the field of patent law¹ and practice, including my knowledge of and experience with the practice and procedures of the USPTO, acquired in part, during the more than 34 years I spent in government service in the USPTO; the patent statutes; the USPTO rules of practice as set forth in Title 37 of the Code of Federal Regulations ("37 CFR"); relevant editions of the USPTO Manual of Patent Examining Procedure ("MPEP") in effect at the time the patents-in-suit were examined; and relevant case law cited throughout this report. My testimony is also based in part on other sources of information identified in this Report and the testimony of witnesses (both expert and fact) and associated documentation in this case.

VI. SUBSTANCE OF TESTIMONY AND OPINIONS

A. Patent Office Practice and Procedures.

16. I note that Mr. Sung expects to testify on various general matters of USPTO practice and procedure. I understand that courts typically do not permit this type of testimony at trial. However, if the court permits, I may testify as to the relevant USPTO practices and procedures applicable to the various types of correspondence that took place in the prosecution

¹ Since January 2005, I have also served as the Director of the Juris Doctor and L.L.M. Programs in Intellectual Property Law at the George Mason School of Law where, in addition, I am an adjunct professor who teaches both patent law and intellectual property law courses.

history of the patent-in-suit, the time periods for taking action by Examiners and applicants. I also may testify as to whether, in my opinion, the actions taken by the Examiners and applicants of the '274 application that ultimately became the '685 Patent conformed to USPTO patent practice and procedures as set forth in the rules of practice and MPEP.

B. The Law of Public Use Under 35 U.S.C. § 102(b) as Described in the MPEP and Federal Circuit Case Law

17. Attached to this report as Exhibit 4 are the relevant sections of MPEP sections 2124 through 2128.07 dealing the law of public use in the United States that were in effect during examination of the '274 application that became the '685 patent-in-suit.²

18. As discussed in MPEP section 2125.01, when making a determination of what was on sale or in public use in the United States, “[r]eduction to practice . . . usually requires testing under actual working conditions in such a way as to demonstrate the practical utility of an invention for intended purpose beyond the probability of failure . . .” MPEP section 2125.01 (5th Edition). Whether an invention is complete “is basically a matter of evaluating the subjective intent of the inventor, as manifested by the objective factual circumstances surrounding the development of the invention.” *Id.* “Even if an invention has been reduced ‘to a reality’, the invention is not necessarily ‘complete’ unless one would know how an invention would work upon installation . . . Such knowledge is not synonymous with the lack of any expectation of ‘problems’ upon installation, as long as the ‘problems’ are not due to ‘fundamental defects’ in the invention.” *Id.* (citations omitted).

19. In MPEP section 2125.02 the law of public use is treated. The MPEP states “[t]he ‘public’ aspect of ‘public use’ would seem to connote some impartation of knowledge to the

² If a public use in the United States of a completed claimed invention takes place more than one year before the filing date of a U.S. patent application, such public use or sale will bar the ability to obtain a patent thereon. 35 U.S.C. § 102(b). In the case of the patent-in-suit, the earliest U.S. filing date is August 9, 1990. Hence, a public use of the claimed invention of the patent-in-suit would have to occur prior to August 9, 1989 to invalidate the patents.

public regarding the workings of an invention. . . . Mere knowledge of the invention by the public does not warrant rejection under 35 U.S.C. 102(b), as stated in *T.P. Laboratories, Inc. v. Professional Positions, Inc.* . . . 220 USPQ 577, 581 (Fed. Cir. 1984), however such public knowledge may provide grounds for rejection under 35 U.S.C. 102(a). . . . Additionally, even a ‘secret’ use by one other than an inventor of a machine or process to make a product is ‘public’ if the details of the machine or process are ascertainable by inspection or analysis of the product that is sold or publicly displayed, *Gillman v. Stern*, 46 USPQ 430 (2d Cir. 1940); *Dunlop Holdings v. Ram Gold Corp.*, 188 USPQ 481, 483-484 (7th Cir. 1975). However, a purely private use of an invention by an inventor and his immediate family for their own enjoyment and pleasure is not necessarily ‘public’. *Bergstrom v. Sears, Roebuck & Co.*, 199 USPQ 269 (D. Minn. 1978).” MPEP section 2125.02 (5th Edition).

20. As the Supreme Court stated in *Pfaff v. Wells Elecs.*, Inc., 525 U.S. 55, 64 (1998), “an inventor who seeks to perfect his discovery may conduct extensive testing without losing his right to obtain a patent for his invention—even if such testing occurs in the public eye.” Additionally, the Court of Appeals for the Federal Circuit in *Bernhardt LLC v. Collezione Europa USA Inc.*, 386 F.3d 1371, 1379 (Fed. Cir. 2004), explained the applicable standard. “Public use under 35 U.S.C. § 102(b) includes any use of the claimed invention by a person other than the inventor who is under no limitation, restriction or obligation of secrecy to the inventor.” (citations omitted). . . . Additional factors a court must consider and weigh in determining whether the use was ‘public’ under § 102(b) include, *inter alia*, ‘the nature of the activity that occurred in public; the public access to and knowledge of the public use; [and] whether there was any confidentiality obligation imposed on persons who observed the use . . .’ (citations omitted) The presence or absence of a confidentiality agreement is not dispositive of

the public use issue, but ‘is one factor to be considered in assessing all the evidence.’” *Id.* (citations omitted). The court noted that important considerations were that “the inventor ‘never used the [invention] or permitted it [to be] used in a place or at a time when he did not have a legitimate expectation of privacy and of confidentiality’ . . . and that “the inventor ‘at all times retained control over the [invention]’s use and the distribution of information concerning it.’” *Id.* at 1379-80.

C. The Experimental Use Exception

21. “As a general rule, a *prima facie* case under 35 U.S.C. § 102(b) cannot be found by the examiner unless an invention is ‘complete’, §2125.01. Experimental activity is quite often conducted by an inventor to determine ‘completeness’, that is, operability and/or usefulness, as well as to ascertain if further modifications or refinements to an invention may be necessary.” MPEP § 2128.01 (5th Edition). “Under this analysis, it is incorrect to impose on the patent owner, as the trial court in this case did, the burden of proving that a ‘public use’ was ‘experimental’. These are not two separable issues. It is incorrect to ask: ‘Was it public use?’ and then, ‘Was it experimental?’ Rather, the court is faced with a single issue: Was it public use under § 102(b)?” *TP Laboratories v. Professional Positioners, Inc.*, 724 F.2d 965, 971 (Fed. Cir. 1984).

22. “[A] significant determinative factor in questions of experimental purpose is the extent of supervision and control maintained by an inventor over an invention during an alleged period of experimentation When an inventor relinquishes supervision and control, subsequent activity with an invention must be scrutinized carefully by the examiner to determine whether there is clear and convincing evidence that such activity is reasonably consistent with the experimental purpose advanced by the inventor.” MPEP § 2128.03 (5th Edition) (citations omitted).

75. The researcher in the vehicle observed the output of the second cellular telephone and the driver's reaction to that output. [MIT06763; MIT06765]. The researcher made note of the driver's reaction and considered ways to improve the components of the Back Seat Driver system as a result. [MIT06763; MIT06765]. After a particular field trial ended, the researcher was able to improve the operation of the system by making changes to any of the components of the Back Seat Driver system.

76. Because the driver did not have access to at least 6 components of the Back Seat Driver system, as claimed in claim 1 of the '685 patent, there was no use by the driver of the claimed invention; instead, the driver reacted to the output of the claimed invention. Both the output and the back-end algorithms were evolving in response to the field trials. Because there was no use of the invention by the driver, axiomatically, the field trials did not amount to public use of the claimed invention. For at least this reason, the field trials were not material to the patentability of the claims of the '685 patent.¹⁴ Dr. M. Elizabeth Cannon, in section IX, part J of her technical expert report, reaches this same conclusion.

77. Inventor Schmandt explained that the test subjects (MIT students) were governed by MIT policies and procedures concerning confidentiality. *See* Schmandt Dep. at p. 89:19-22. He further indicated that there were certainly efforts made to keep information about the Back Seat Driver project confidential. *See* Schmandt Dep. at p. 89:23-90:5. He further stated that:

certainly our own students and staff were certainly aware, all graduate students and staff were certainly aware of policies, as far as revealing information. That is sort of at a couple of levels. I mean in general there's publishing or making publicly available through the -- in an academic

¹⁴ In the event that the Court deems the driver's exposure to the outputs of the Back Seat Driver system to be use, such use did not occur publicly, at least because the driver was not exposed to the computing apparatus as it operated at the Media Lab during the field trials. Moreover, an observer viewing the driver maneuvering the automobile could not know that the car was being driven by a driver who was receiving real-time spoken instructions from the Back Seat Driver system.

environment you publish your own work, and other people aren't allowed to. So, it would be a violation of academic ethics if I try to publish somebody else's work, doubly so if I tried to claim ownership of it, but so it's really up to whoever does the work when and where to publish it. And, other than that, people aren't supposed to do so. In our case, we also had corporate sponsors, and we had policies in place about revealing information that those sponsors were sponsoring. And certainly our students at the Media Lab were aware of those policies. The – it wasn't a secret that – it wasn't a secret within our group that we were working on a system that had certain capabilities, and in fact some of how I worked was hardly a secret within our group, within our lab. Part of what makes the Media Lab an attractive environment for students is that there is a wide range of things that they can learn. It's an environment where they do research. It would be unfair to the students to say this work is secret, you can't know anything about it. But, the students generally understood that there is a difference between openness with each other within the confines of the building, including a car that is not in the building, obviously, and discussion with the general public.

See Schmandt Dep. at p. 91:1-92:8. Additionally, inventor Schmandt discussed how graduate students were given documents to sign and how undergraduates were bound by ethics guidelines.

See Schmandt Dep. at p. 92:9-95:9.

78. Inventor Davis in his deposition indicated that there was an obligation of confidentiality or secrecy regarding the Back Seat Driver that "applie[d] to everyone at the lab, and it's something that one understands, because it's part of the culture." *See* Davis Dep. at p. 103:14-104:12. Moreover, Inventor Davis stated that:

No one looking at the car from outside would have any reason to suspect that there was anything unusual in the car. It's certainly not necessary to, you know, disguise the car. You can't tell from looking what's going on. So it was not necessary to do the trials only at night or something if that's what you're getting at.

See Davis Dep. at p. 105:2-9.

to patentability. In my opinion neither the characterization of the CARIN system in the IDS nor the failure to disclose the CARIN system were inequitable conduct.

- Mr. Sung has not established by clear and convincing evidence that there was a public use either under 35 U.S.C. § 102(b), or 35 U.S.C. § 103(a) based upon 35 U.S.C. § 102(b), of the inventions covered by the claims of the '685 patent. In my opinion the failure to disclose the Back Driver Field Trials was not inequitable conduct.
- Mr. Sung has not established by clear and convincing evidence that Inventors Davis and Schmandt or Attorney Pasternack violated the duty of disclosure in failing to bring to Examiner Lall's attention the thesis bibliography references not cited in an IDS or to provide copies of publications that were listed in the IDS. In my opinion the failure to disclose the Davis thesis bibliography references and other articles incorporated by reference into the '685 patent was not inequitable conduct.

VIII. RIGHT TO SUPPLEMENT OR AMEND

85. I reserve the right to supplement and/or amend the opinions expressed herein in response to positions taken by Harman or Harman's experts, to amplify what is stated above, where necessary, and especially in view of information not presently known to me or new information presented by Harman's experts prior to, or at trial, and to supplement this report should additional information be brought to my attention during the course of this proceeding.

Dated: August 22, 2006



Stephen G. Kunin